Electric Choice Question 6: *Would a change in the choice cap have an impact on the financial stability of utilities and investors' ability to make long-term, substantial investments in new generation? What are the potential implications (benefits, costs, risks) of a greater or lesser reliance on wholesale markets to meet long-term capacity needs?*

Executive Summary

I. An increase in the choice (retail access / deregulation) cap would reduce the financial stability of utilities and therefore investors' willingness to make long-term, substantial investments in new generation

1. In Michigan, an increase in the cap would allow more customers to move freely between regulated rates and retail access, creating demand uncertainty equivalent to a few power plants of capacity; this uncertainty for utilities inhibits long-term planning and investment for reliability
2. In an uncapped or high cap model, as some customers switch to deregulated rates, rates for utility customers increase dramatically – as recently experienced in Ohio. Shifting the burden of fixed cost recovery to a subset of customers is an unsustainable model and ultimately drives a move toward full deregulation
3. Under deregulation, the volatility of commodity cycles and lack of cost recovery assurance lead to financial distress and limit the willingness of deregulated generators to invest in existing and new generation assets
4. An increase in the Michigan cap would expose Michigan utilities to the financial difficulties of deregulated generators including credit downgrades. Deregulation in Michigan was originally seen as negative by credit rating agencies and the 10% cap was seen as positive for stability and therefore credit profile. Negative credit ratings would impact Michigan's utilities' ability to invest for a reliable, diverse electric system and the cost to customers

II. Greater reliance on the deregulated (wholesale) market to meet long-term capacity needs would put long-term reliability at risk

5. The deregulated market does not incent sufficient investment with a long-term reliability view for three reasons:
   - Reliability is a public good. Economic theory supports the value of reasonable regulation to ensure optimal supply of public goods
   - A deregulated market does not provide investors with sufficient assurance of recovery of investment; recovery is generally only gained when prices spike high enough over an adequate period of time
   - In a deregulated market, investments will be made for profit without the requirement to ensure long-term reliability, sustainability, and the lowest cost to customers
6. States with deregulated markets are facing reliability concerns (Texas, Maryland, and New Jersey)

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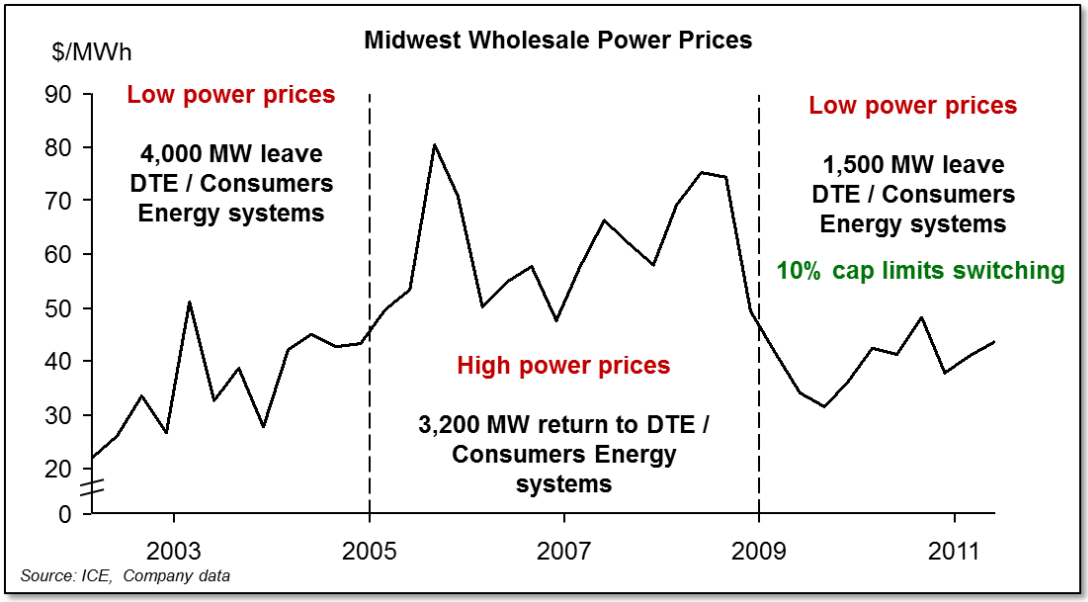
I. An increase in the retail access cap would reduce the financial stability of utilities and therefore investors' willingness to make long-term, substantial investments in new generation.

1. In Michigan, an increase in the cap would allow customers to move freely between regulated rates and retail access, creating demand uncertainty equivalent to a few power plants of capacity. This uncertainty for utilities inhibits long-term planning and investment for reliability.

   This uncertainty in demand, with customers leaving the utility in periods of low power prices and returning in periods of high power prices, was experienced in Michigan from 2000-2008 prior to the implementation of the 10% deregulation cap.



4,000 MW is equivalent to ~6 large power plants with 30 year lives – this switching creates uncertainty for long-term planning and investment

2. In an uncapped or high cap model, as some customers switch to deregulated rates, rates for utility customers increase dramatically – as recently experienced in Ohio. Shifting the burden of fixed cost recovery to a subset of customers is an unsustainable model and ultimately drives a move toward full deregulation.

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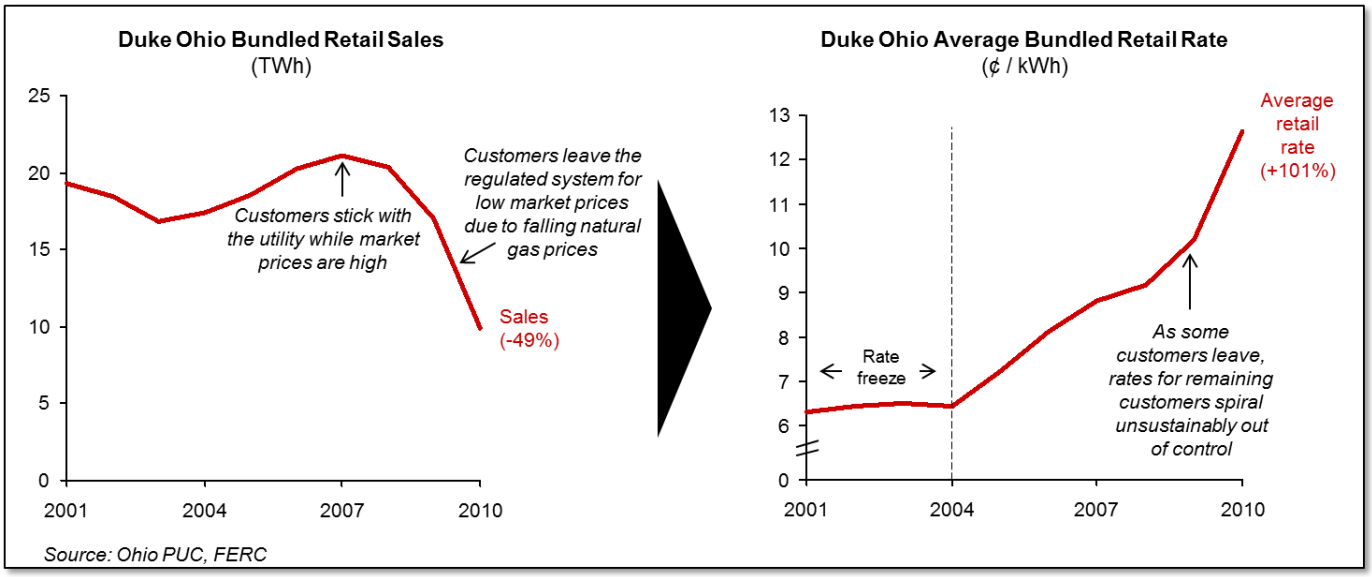
Ohio's Electric Security Plans (ESP) allowed unlimited customer switching and created uncertainty around whether Ohio utilities would have enough sales to recover their investments. Investment and cost recovery were authorized by the Commission, but as some customers left regulated utility rates for retail access, this investment and cost recovery had to be spread out over fewer sales. This resulted in further rate increases that became unsustainable for the remaining utility customers.



The combination of high rates for some customers and the uncertain investment environment ultimately forced Ohio's power companies to begin the transition to full deregulation in 2012. The low power price market and the large number of customers on retail access would have made a move back to regulation difficult, especially as one Ohio utility transitioned to a fully deregulated model prior to the implementation of ESP plans.

In the future, Ohio will have to face the challenges of a deregulated market, including the fact that generation investments will now be made based on profit alone, as opposed to the need to ensure reliability.

As discussed in the next section, deregulated generators are not currently making investments, because they are motivated by profit rather than by the responsibility to ensure reliability.

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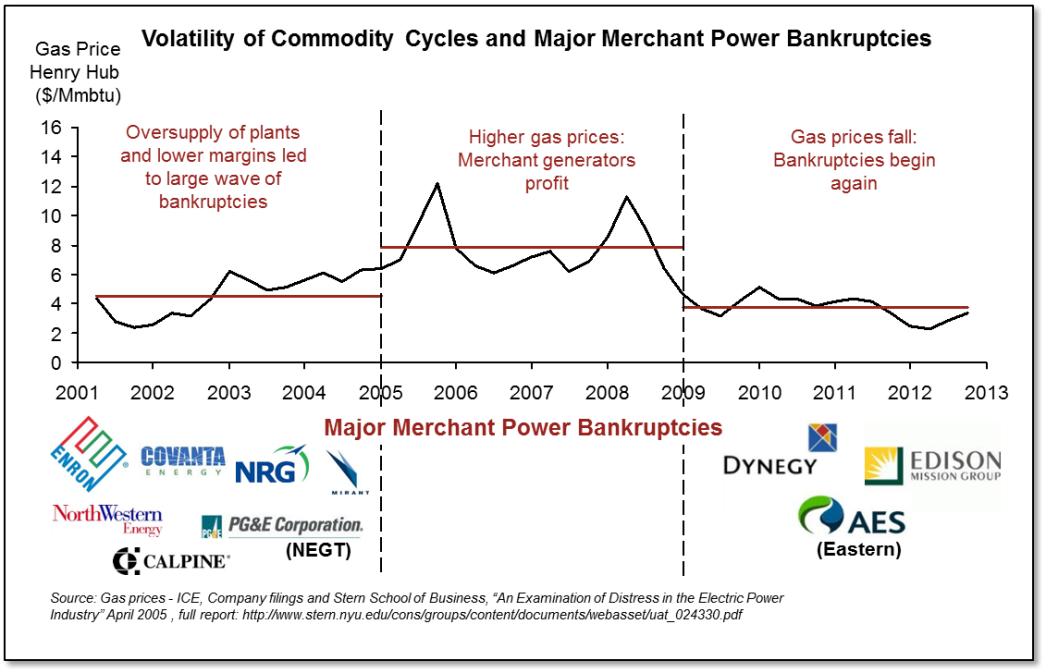
3. Under deregulation, the volatility of commodity cycles and lack of cost recovery assurance lead to financial distress and limit the willingness of deregulated generators to invest in existing and new generation assets.

   Deregulated (or "merchant") power producers have experienced significant financial distress since deregulation began around 2000. Prior to the full implementation of deregulation, there was a capacity overbuild in the early 2000s. This period of over-investment, coupled with lower than expected demand, resulted in an oversupply of capacity. This oversupply of capacity and the volatility of commodity cycles have led to numerous bankruptcies of deregulated generators.

   Those bankruptcies are a good indicator that the "merchant" industry and those who finance it are unlikely to repeat the same mistake. Regardless, it would be very risky to rely on deregulated generators to once again overbuild to guarantee reliability.



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Many of the "merchant" power producers that emerged from the early 2000s are facing investment challenges from today's low deregulated market prices. NRG (which acquired GenOn, the successor company of Reliant and Mirant, in 2010) cannot justify investment in new plants even in Texas and New Jersey, states facing reliability issues as detailed later in this document.

NRG is pushing out any long-term investments in new Texas plants: *"[In ERCOT (Texas),] we continue to see reserve margins below the target level despite downward revisions in local estimates by ERCOT in their latest report…spark spreads [profits] have improved recently… but remain below new build economics by $4 to $5 per megawatt-hour"*

NRG is also closing New Jersey plants and notes: "*the combination of significant retirements plus a heavy reliance on demand response to meet the reserve margin target would indicate to us the need for some premium in the market [PJM], which is notably absent"*

Source: NRG February 2012 earnings call, COO and Executive V.P. Mauricio Gutierrez

Other companies– such as Edison Mission, Ameren, and Exelon – that did not face early financial difficulties because they transitioned slowly to deregulation, are also experiencing severe financial distress in their deregulated generation segments today. As shown in the table below, their financial struggles have led to plant shut-downs and curtailed investment in generation, given weak power price outlooks and an inability to recover their investments. The shut-down of plants and lack of investment places future reliability at risk in exchange for short-term cost savings, as deregulated generators make these decisions based on financial concerns first and foremost.

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Companies with Recent Distressed Merchant Generation

Company	Stock price performance (Jan '08 – Jan '13)	Credit profile of deregulated generation	Credit commentary	Companies exit the business or reduce investment
EDISON INTERNATIONAL	-16%	Bankrupt	"High probability of a default…in light of expected weak cash flow, environmental capital requirements, and upcoming debt maturities" – Moody's	"Low capacity and power prices as well as high fuel costs have been hurting Edison Mission's profitability…accelerating the shuttering of its Fisk and Crawford plants"
Ameren (Deregulated IL generation)	-39%	Sub-investment grade	"Ameren Genco's B2 senior rating is primarily driven by its shrinking financial resources … amid an environment of low power prices" – Moody's	"In exiting the merchant generation business, Ameren cited decreased earnings and cash flows over the past few years"
Exelon (Deregulated national generation)	-65%	Recent downgrade and negative outlook	"Rating… reflects last week's announcement by management to defer $2.3bn in growth capital expenditures" – Moody's	"Free cash flow will be enhanced by the deferral of $1.025 billion of capital investment for extended power nuclear up-rates…and by the removal of an additional $1.25 billion for renewable projects"

Source: Company filings, Credit Research

4. An increase in the Michigan cap would expose Michigan utilities to the financial difficulties of deregulated generators including credit downgrades. Deregulation in Michigan was originally seen as negative by credit rating agencies and the 10% cap was seen as positive for stability and therefore credit profile. Negative credit ratings would impact Michigan's utilities' ability to invest for a reliable, diverse electric system and the cost to customers.

Credit rating agencies see deregulation as a credit risk – the 10% cap in Michigan was positive for credit ratings and stability

Moody's	"As difficult economic and operating conditions enter a fourth year and show no signs of abating, the ratings of the investment-grade unregulated power companies are facing increasing negative pressure…Over time, some downgrades into the speculative grades are possible" -*2012*
FitchRatings	"Fitch considers the legislation [2008 Energy Law], as proposed, supportive of the credit of investor-owned electric utilities operating within the state." Fitch also said a third key provision, the 10% cap on customer choice, "would help utilities more accurately forecast capacity and energy required by customers" -*2008*
Standard & Poor's Ratings Services	"Detroit Edison's competitive position and cash flow have eroded throughout 2004 with the introduction of deregulation in Michigan" - *2004*

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II. Greater reliance on the deregulated (wholesale) market to meet long-term capacity needs would put long-term reliability at risk.

5. The deregulated market does not incent sufficient investment with a long-term reliability view.

- Reliability is a public good. Economic theory supports the value of reasonable regulation to ensure optimal supply of public goods.

  Electricity is fundamentally different from most other industries and products and its unique characteristics require the electric system to have a margin of safety to ensure reliability. The reliability of the electric system is a public good that benefits everyone by supporting a strong and stable economy, protecting health and safety, and providing other intangible benefits.

  Public goods tend to be under-produced and under-invested in under free market conditions, producing market inefficiency. Economic theory supports government regulation to ensure sufficient production of a public good such as electric reliability. Without sufficient investment in reliability, we risk facing brown- or black-outs, with potentially drastic societal and personal consequences.

  (See Overall Question 1- Making Good Energy Decisions response for detail)

- A deregulated market does not provide investors with sufficient assurance of recovery; recovery is generally only gained when prices spike high enough over an adequate period of time.

  In order to make any type of investment, holders of capital need either certainty of recovery or the opportunity to earn extremely high returns that are commensurate with the level of risk inherent in the investment. In a deregulated market, if the assurance of financial recovery is not available through high enough prices over an adequate time period, there will not be investment, even if future reliability requires it (as can be seen in the comments from deregulated generators discussed above). Even deregulated markets with centralized capacity markets do not provide the assurance of recovery necessary to achieve the desired level of reliability, as evidenced by experiences in New Jersey and Maryland, as described in the section below.

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"Investors' basic requirement is that they can expect future revenues to be high enough, often enough, to cover the costs of building a plant, including a return on capital commensurate with risk"[1]

"This means that system-wide reliability and resource adequacy directly depend on the level of market-based revenues available to suppliers. If such revenues are insufficient to cover the total forward looking costs, new capacity will not be built and existing capacity will not be retained"[2]

Source: [1]The Brattle Group, "ERCOT Investment Incentives and Resource Adequacy" June 2012, Report:www.ercot.com/content/news/presentations/2012/Brattle%20ERCOT%20Resource%20Adequacy%20Review%20-%202012-06-01.pdf

[2]The Brattle Group, "A Comparison of PJM's RPM with Alternative Energy and Capacity Market Designs" September 2009

- In a deregulated market, investments will be made for profit without the requirement to ensure long-term reliability, sustainability, and the lowest cost to customers.

  Investments that are made in deregulated markets are not always made at the lowest cost to customers, nor do they necessarily account for long-term sustainability including a balanced portfolio of generating capacity or one that addresses societal goals like environmental protection.

  "Uncertainty also decreases available discretionary capital and creates a preference for more flexible, less capital-intensive generation assets. These assets with lower investment costs may have a higher total costs, but are still attractive to investors if faced with considerable uncertainty of recovering their fixed investment costs."

  Source: The Brattle Group, "A Comparison of PJM's RPM with Alternative Energy and Capacity Market Designs" September 2009

  For example, a deregulated generator may choose to build a few smaller gas plants over time when a large gas plant may have been more cost-effective from the beginning, but uncertainty of recovery drove them to choose the option with lower initial investment costs but higher costs overall.

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6. States with deregulated markets are facing reliability concerns (Texas, Maryland, and New Jersey).

   Reliability is at risk without investment. Texas, Maryland, and New Jersey, deregulated states, are now facing reliability concerns in today's low power price environment, in which the deregulated market has not incented sufficient investment in generation.

   ERCOT (Texas) is facing reserve margins below the NERC Reference Margin level in 2014. In response, ERCOT has lifted price caps to $9,000/MWh by 2015 to try to incentivize the building of new plants (compare to the $20-30/MWh ERCOT price range in February 2013). ERCOT is also evaluating other options, such as a centralized forward capacity market similar to the one in PJM. Unfortunately, forward capacity markets have also been ineffective in incentivizing sufficient new generation capacity.

   In recent years, both New Jersey and Maryland became concerned that the PJM energy and forward capacity market had not incented a sufficient amount of generation investment for future reliability. After performing their own studies, both states implemented regulated mechanisms to guarantee a return on investment for new generation needed to meet reliability standards.

   States having to intervene with specific contracts, as seen in New Jersey and Maryland, reflect extreme regulation far beyond traditional reasonable regulation. California had to intervene with largely out-of-market power purchase agreements following the California Energy Crisis to ensure generation – and customers are still paying for those expensive contracts. These extreme regulatory solutions became necessary because of the market failures of deregulation to provide for reliability.

   (See Electric Choice Question 7 response for more information on the reliability concerns and state intervention in Texas, Maryland, and New Jersey)